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INSTRUCTIONS

FOR MAKING

UNFERMENTED BREAD.

WITH

OBSERVATIONS

ON ITS PROPERTIES,

MEDICINAL AND ECONOMIC.

BY

A PHYSICIAN.

G. DARLING

TENTH EDITION, WITH ADDITIONS.

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Notice to the Third Edition.

The favourable manner in which the First and Second Editions of this MEMOIR have been received by the Public has encouraged the Author to renew his experiments for the further improvement of the process. The result is now communicated in formulæ which render the bread much lighter, and also more grateful to the taste, than those previously given.

Sept. 9, 1846.

Notices to the Fifth Edition.

Since the note at page 10 was written, a considerable rise in the price of the soda has taken place in the market, occasioned probably by the unusual and extensive demand created for it; but this can only be temporary, for with a remunerating price there is no limit to the productive powers of the manufacturers. Retailers should be careful to supply the acid of the strength directed.

With reference to the present distress it may be observed, that a nutritive and palatable bread may be made, according to the process now recommended, either from an admixture of one part of wheat-meal, and two of maize-meal; or from equal parts of wheat-meal, and of oat-meal, pease-meal, or barley-meal.

Dec. 14, 1846.

Notice to the Eighth Edition.

The meal of rye was not included in the above notice, among those which might be added to wheat-meal for the purpose of making a mixed and cheaper bread, because it is poisonous in wet seasons, and is injurious to many persons in all seasons; on this account millers should be cautioned not to adulterate their wheat-meal with that of rye, as some of them are in the habit of doing.

May 1, 1847.

INSTRUCTIONS
FOR
MAKING UNFERMENTED BREAD.

DR. THOMAS THOMSON, Professor of Chemistry in the University of Glasgow, wrote an Essay on Baking, for the Supplement to the Encyclopædia Britannica, which was published in the second volume of that work, in the year 1816.

After stating the then ascertained fact, that the only purpose served by fermentation in bread-making is the generation of the carbonic acid required to raise the dough, he goes on to observe, that this may be obtained from carbonate of soda, by mixing a portion of that article with the flour, and then adding a corresponding quantity of muriatic acid ;—and further, that “the dough so formed will rise immediately, fully as much if not more than dough mixed with yeast ; and, when baked, will constitute a very light and excellent bread.”

This method was tested at the time by several other persons, and found to answer perfectly ; but it seems to have been regarded only as a philosophical curiosity. Successive attempts were indeed made to turn it to some account, but none of them excited much attention till of late years, when it was discovered that the bread made in this way was both more wholesome and more economical than that made by fermentation. On these grounds the writer of this tract was led to look into the matter, and to contribute his endeavours to bring the bread into use ; and various formulæ, constructed from Dr. Thomson's, having appeared, he was induced to print those which he had found to answer the end best, together with a few brief Explanations and Observations, in the hope that they would serve to extend the advantages of this great improvement in the art of bread-making. His subsequent investiga-

tions having suggested to him the adoption of new and much improved formulæ, these are now substituted for the former.

TO MAKE WHITE OR FLOUR BREAD.

Take of Flour, dressed or household, 3lbs. avoirdupois.

Bi-Carbonate of Soda, in powder, 9 drachms apothecaries' wt.

Hydro-Chloric (Muriatic) Acid } 11 $\frac{1}{4}$ fluid drachms.
(specific-gravity 1.16) }

Water about 25 fluid ounces.

TO MAKE BROWN OR MEAL BREAD.

Take of Wheat Meal* 3 lbs. avoirdupois.

Bi-Carbonate of Soda, in powder { 10 drachms apothecaries'
weight.

Hydro-Chloric (Muriatic) Acid { 12 $\frac{1}{2}$ fluid drachms.
(specific gravity 1.16) . . . }

Water about 28 fluid ounces.

* That is, wheat well ground, as it comes from the mill, retaining the whole of the bran. The productions from meal, by screening, differ somewhat at different mills. The most usual are in succession, bran, fine bran or coarse pollard, fine pollard, coarse middlings, fine middlings, flour No. 3, flour No. 2 or seconds, flour No. 1 or household. By separating one or more of these only, meal or flour of various qualities may be obtained, and bread made adapted to every habit. When families make their own bread, and find that the meal as it comes from the mill does not suit them, they may purchase flour and bran separately and mix them, as instructed by experience or advice, at home. By this means they will be able both to select their bran, and to vary the proportion of it in the flour, according to the effect desired. Dealers who have little demand for meal are themselves in the habit of preparing it in this way when it is asked for. The mixture thus sold for meal consists of flour 2 $\frac{3}{4}$ lbs., and bran or pollard $\frac{1}{4}$ lb. But the double operation of first sifting out the bran and then mixing it again causes an unnecessary addition to the price, and the product after all is not so good as genuine meal. The best way to obtain an intermediate bread is to sift out the coarser bran from the meal; and the next best, to mix portions of meal and flour: these, in equal parts, yield a composition well suited to persons who do not relish bread made of pure meal, or with whom that disagrees. For the more constipated, who experience less than the desired benefit from meal bread, an extra quantity of bran may be introduced with advantage; or tartaric acid, which forms with soda a cooling aperient salt, may be substituted for the hydro-chloric,—seven drachms and six

First, mix the soda and the meal or flour as thoroughly as possible. This is best done by shaking the soda from a small sieve over the meal or flour with one hand, while they are stirred together with the other, and then passing the mixture once or twice through the sieve.* Next, pour the acid into the water, and diffuse it perfectly, by stirring them well with a rod of glass or wood. Then, mix intimately the meal or flour and the water so prepared as speedily as possible, using a wooden spoon or spatula for the purpose. The dough thus formed will make two loaves somewhat larger than half-quarters. They should be put into a quick oven without loss of time. This is most conveniently done in tins, or in iron or earthen pots or pans. The earthen deserve the preference, as they yield a better bread

grains for the white formula, and seven drachms and fifty three grains for the brown. Bread made with this acid is sufficiently agreeable to the taste, but being *medicated* it is not fit for general use, and should only be taken medicinally. This observation applies to all the acids which, having a stronger affinity for soda than the carbonic, might otherwise be employed in the process, except the hydro-chloric : it applies also to the carbonate of ammonia, introduced by many German bakers into their common fermented bread, for the purpose of making it *lighter* than it can be rendered by fermentation. Butter-milk, unskilfully made use of by country people in some parts of the kingdom, is liable both to this and to the further objection, that we have no ready means of ascertaining the strength or proportion of its acid in any given quantity, to say nothing of the undesirableness of introducing all the other ingredients of the milk into the bread. The hydro-chloric acid, as is stated in the text, forms with the soda common salt—an indispensable ingredient in all bread. As tartaric acid and soda are, both powders, and little disposed to act chemically on each other by simple contact, they may be mixed by the druggist, and sold as one substance, and it is also practicable for the corn-dealer to mix them with the flour or meal, so that the product may be supplied to the baker or householder in a state ready for the addition of the water; but the bread made from these preparations would not only be *medicated*, but would be rendered much too expensive for common use, and the preparation either way could not be kept long.

* When the quantities are small, the mixing may be effected by rubbing the flour and soda together carefully with the hands; on a very large scale it may be done by the miller.

than either the tin or the iron. Common flower-pots suit particularly well. Iron does better than tin. But the loaves may be made into a batch and baked in the same way as fermented bread; and, if a thin flat tile be placed between each loaf, the tendency to cohere, which however is not greater in this than in other dough, will be obviated, and the bread will be in all respects equal, or rather superior, to that baked even in earthen pans. The dough may also be formed and baked like cottage loaves. The oven should be made hotter than for fermented bread. A portable one, such as that improperly called "American," where there is no other, and a common fire, will answer the purpose. About an hour and a half will be required for the baking.

The proportions of soda and acid are those which make common culinary salt, when united chemically. This union takes place as soon as heat is applied; and then the carbonic acid, being set free in its state of gas, expands the dough, or raises it, so as to form bread. If either the soda or the acid be in excess, the bread will taste of the one or the other accordingly; but it will not be on that account unwholesome. The salt so formed is sufficient to flavour the bread for most palates; but if more be desired, the soda and acid may be somewhat increased, or a small portion of common salt may be super-added, by dissolving it in the water before that is mixed with the acid. The addition of a quarter of an ounce renders the white bread more agreeable in the estimation of some persons. Much handling, and hot water, are hurtful, by causing the union to take place before the proper time. For this reason, the water should be as cold as possible; and more or less of it must be used, as experience will readily direct, to suit the varying quality of the flour, which necessarily differs with seasons, soils, and other circumstances. The dough should not be made stiff. The thinner it is, so that it can be handled conveniently, the lighter will be the bread. When too much water has been used, the bread will be unpleasantly moist. Milk (and it answers best when skimmed) may be used, on particular occasions, either wholly or in part, instead of water. The soda should be diffused equally through the flour. If it be

deficient in any part, the dough will not rise there; and if in another it be too much, or in a little lump, in that place the bread will shew a yellowish spot. Such marks are disagreeable to the eye, but not otherwise injurious. The largest quantity of flour that can be mixed with ease at one time by a beginner is 12lbs.; but three times that amount will not be too much for an experienced workman. The whole process of preparation for the oven need not exceed a quarter of a hour; and any person capable of ordinary attention may conduct it: for, on a small scale, it is as simple and easy as the making of a common pudding, except perhaps that accuracy in quantities is more important. The writer of this notice has seldom known a cook fail, even on her first trial, when carefully instructed. The only apparatus required, in addition to the usual kitchen furniture, is a graduated glass measure, to measure the acid; a small set of apothecaries' weights, to weigh the soda; a small sieve, and a wooden spatula.* As just observed, accuracy in measuring and weighing is essential; but this requires no qualification beyond the most common attention.

It will be convenient to keep some acid, diluted with water, in a bottle for use, since by this means a trivial error in measuring will be of less consequence than when it is in a concentrated state. Add, for example, one part of acid to three of water, or say, *six ounces* of the former to *eighteen†* of the latter; and then *five ounces and five drachms* of the diluted

* Two sieves will be wanted when both kinds of bread are made, one adapted for flour and another for meal.

† To simplify this matter and guard against mistakes in the hands of the unskilful, single weights have been prepared for the exact quantity of soda required for 3lbs. of flour and for the like of meal, and glass measures graduated for the corresponding proportions of acid—diluted as advised in the text. These weights and measures may be procured of the publishers of this pamphlet.

It may seem superfluous to add, that it will save some trouble, and lessen risk, to weigh out, at leisure, portions of soda suited to each baking, for any given time, and preserve them in packets for daily use; or that any one may easily make single weights for himself from bits of lead suited to the portions of soda which he wishes to weigh.

acid will be the proportion for three pounds of flour, and *six ounces and two drachms* for three pounds of meal. It is hardly necessary to say, that when this is done a deduction must be made from the water as directed in the formulæ equal to the portions thus applied with the acid, which will leave about 21 ounces for the flour, and about $23\frac{1}{2}$ for the meal.

In the first and second editions, the portions of the chemicals were stated to be half an ounce of soda, and five fluid drachms of acid, to 3 pounds of flour; and $4\frac{1}{3}$ drachms of soda, and 5 fluid drachms and 25 minims of acid, to 3 pounds of meal. These make good bread, but very inferior to that produced by the formulæ now given. The former quantities are about the smallest that yield good bread, the latter the largest that can be introduced without rendering it too salt. They may be varied from the one extreme to the other, according to taste and the lightness desired, provided the relative proportions of the soda and of the acid be preserved:—viz. 20 grains of the former to 25 minims, or drops, of the latter. If smaller quantities than these now recommended are used, it will be necessary to add a little salt to the composition, from one-third to two-thirds of an ounce, as before directed.*

* It is worth mentioning, that the dough of this process forms a very superior paste, better looking and more digestible than any made in the common way, and adapted equally for baking or boiling. The following proportions make a good plain pudding, which may be enriched as desired by the addition of fruit, etc. Flour, $1\frac{1}{2}$ lbs.; bi-carbonate of soda $\frac{1}{2}$ oz., apothecaries' weight; hydro-chloric acid, 5 fluid drachms; suet $\frac{1}{4}$ lb., or more or less; ginger in powder $\frac{1}{2}$ a drachm; water, about 1 pint. Mix according to the directions given above, and boil in the usual way. When made quite plain, and with little or no suet, this pudding may be eaten with meat, as a substitute for potatoes when these cannot be obtained, or when they are bad in quality.

It may be agreeable to some to subjoin a recipe for unfermented cakes. Take of flour $1\frac{1}{2}$ lb., bi-carbonate of soda $\frac{1}{2}$ oz., hydro-chloric acid 5 fluid drachms, sugar $1\frac{1}{2}$ oz., butter $1\frac{1}{2}$ oz., milk 21 oz. Mix the flour with the soda as before advised, and then with the butter by rubbing them together. Next, dissolve the sugar in the milk, and diffuse the acid through it by stirring; then mix the whole inti-

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BREAD made in this manner contains nothing but flour or meal, culinary salt, and water. It has an agreeable natural taste, keeps much longer than common bread, is more digestible, and much less disposed to generate acid. Common bread, like every thing that has been partially fermented, ferments easily again, to the great discomfort of many stomachs; and not only so, but by acting as a *ferment*, it communicates a similar action to the food in contact with it, when the digestive power is too weak to control or counteract the operation of the chemical affinities, as “a little leaven leavens the whole lump.” Unfermented bread, being free from this defect, is beneficial to those who suffer from headache, acidity, flatulence, eructations, a sense of sinking at the pit of the stomach, distension or pain after meals, and to all who are subject to gout or gravel. It is also useful in many affections of the skin. These remarks apply to both varieties of the bread, but especially to the brown, which is further invaluable to all who are liable to constipation from torpidity of the colon or large intestines, the common infirmity of the sedentary, and of those who have been accustomed to oatmeal diet in their youth. The white, on the contrary, is beneficial when the bowels are too much relaxed. There are other cases, as will presently appear, in which the brown is calculated to do much good.

But the advantages of the process are not limited to matters relating to health. It is valuable, because bread can be prepared by it in the short space of two hours, thus saving much time and labour, and emancipating journeymen-bakers from the slavery of night-work. It is valuable also, because the materials are not perishable, and may be rendered available in places, and at times, when yeast or other ferment is not within reach, as at sea, for example, or in country retirements; and it is still more valuable as regards economy. The cost of the chemicals is counterbalanced by that of the yeast, salt, and

mately, adding fruit at discretion, and divide the product into two or more portions for baking, which is effected best in flat earthen pans.

alum, otherwise employed; but were it not so, they would form an altogether unimportant* item in the price of the bread; while, by their use, a saving is effected in the flour of about 10 per cent.† In the common process, the saccharine part of the flour, with a portion of both the gum and the gluten, is lost by being converted into carbonic acid and spirit, which are driven into the atmosphere by the heat of the oven; and this waste is incurred, as was before remarked, solely for the purpose of getting carbonic acid to raise the dough. By the new method, the waste is avoided and the gas obtained in a manner equally beautiful and efficacious,—another striking instance of the successful application of chemical philosophy to the common arts of life.

It may not be out of place to observe, that mistaken notions respecting the quality of different sorts of bread have given rise to much waste in another way. The general belief is, that bread made of the finest flour is the best, and that whiteness is the proof of its quality; but both these opinions are popular errors. The whiteness may be, and generally is, communicated by alum, to the injury of the consumer; and it is known to men of science, that the entire meal will sustain life, while common bread made with refined flour will not. Keep a man on unfermented brown bread and water, and he will live and enjoy good health; give him fermented white bread and water only, and he will gradually sicken and die. The meal of which

* The wholesale price of the soda, in London, at the present time, is 23s. per cwt.—and of the acid, 1½d. per lb. per carboy. The baker who supplies the author's family obtains soda at 3d. per lb., and acid at 2d. per lb, in moderate quantities, from Mr. Bainbridge, 60, Leather Lane, Holborn. Mr. B. promises to supply other bakers as well as private families at the same rates. Mr. Battley, White Cross Street, Finsbury, undertakes to do the same; and other chemists and druggists will, no doubt, follow their example.

† The waste varies, according to the degree to which the fermentation has been excited and its duration; and consequently is greater in some hands and in some places than in others. M. Dumas, in his "*Chimie Appliquée*," makes the loss in Paris 17·6 per cent. The author's experiments were made in London.

the first is made contains all the ingredients essential to the composition or nourishment of the various structures composing our bodies. Some of these ingredients are removed, or much reduced in quantity, by the miller, in his efforts to please the public, and others, as now shown, are destroyed by fermentation; so that bread of fine flour, and particularly when made by the fermenting method, instead of being better than meal bread similarly made, is the least nourishing; and, to make the case worse, it is also the most difficult of digestion. The loss is therefore in all respects a waste; and it seems desirable that the admirers of white bread howsoever made (but especially the poor, who are the greatest sufferers) should be made acquainted with these truths, and brought to inquire whether they do not purchase the gratification of their fancy at too high a rate. The unwise preference given so universally to white bread led to the pernicious practice already noticed of mixing alum* with the flour, and this again to all sorts of adulterations and impositions; for it enabled bakers, who were so disposed, by adding more and more alum, to make bread, made from the flour of a damaged or an inferior grain, look like the best or the most costly, and to dispose of it accordingly; at once defrauding the purchaser, and tampering with his health. It is one of the advantages of the effervescing process, that it would put an end to all such practices, as its chemical materials and alum are incompatible.

Among the matters removed by the miller is the larger portion of the saline substances, which are indispensable to the

* The writer has good authority for stating that the use of alum, or "stuff" as it is called in the trade, is very general, if not universal, in London; the most conscientious bakers being constrained to employ it, since all bread not whitened by its means is rejected by their customers as inferior in quality:—such is the effect of prejudice and ill-directed public opinion. The proportion of alum introduced varies from 22 grains in the quartern loaf to three times that amount, and often more, according to the quality of the flour — quite enough to constipate the bowels and derange the digestive organs of all who make much use of the compound.

growth of the bones and teeth, and are required, although in a less degree, for their daily repair. Hence the prevalence of soft or imperfectly formed bones and teeth among children whose mothers have made much use of white bread while breeding or suckling them, or who have been fed after weaning with the same material. It follows, that brown bread should be given to the pregnant, to nurses, and to the young or the growing, and that it should be preferred by all, of whatever age, whose bones show a tendency to *bend*, or who have weak teeth. The passion for white bread, as respects the mass of the population, is peculiar to England; and it has been often observed, that there are more bad teeth among the English than among any other people.

The meal bread will in general be found the best by all persons who have sluggish bowels, and stomachs equal to the digestion of the bran. But with a few it will disagree, for the bran is too exciting to irritable bowels, and is dissolved with difficulty in some stomachs. When this happens, the coarser bran should be removed, either wholly or in part; and by so doing the bread may be adapted, with the greatest ease, to all habits and all constitutions. With this proviso (except, perhaps, in some cases of calculus) the least refined, or rather the more natural, will be preferred by all who have an enlightened regard to health and economy.

Fermentation, as was before stated, destroys part of the flour or meal. We find, in consequence, that a sack or 280 lbs, which makes 360 lbs of bread, or 90 quartern loaves, by fermentation, gives 408 lbs, or 102 quartern loaves, by effervescence.

The loss by refining is still greater: a quarter of wheat, weighing 520 lbs, or 65 lbs per bushel, produces 512 lbs of meal; and these, after a course of screening, yield only 416 lbs of flour, a diminution of 96 lbs, or 18 per cent. Thus it appears, that a quarter of the best wheat, ground for meal, and manufactured by the simple but efficacious process now brought into notice, will give 746 lbs of the most nutritious bread; but if converted into flour, “by officiously separating what nature has beneficially combined,” and further reduced and deteriorated by fermentation, the product will not exceed 534 lbs; ex-

hibiting a loss in quantity of bread, to say nothing of its inferior quality or inability to sustain life, of 212 lbs, or 106 such loaves as are usually seen in the shops and at our tables.*

The total loss by fermentation and by refining, taken together, independent of the cost of labour and machinery, is under estimated at 25 per cent. Now, by the common computation, 18 millions of quarters of wheat are made into bread annually in England and Wales. The annual waste of human food in these divisions of the United Kingdom is therefore, at the rates given, 4,500,000 quarters of wheat, equivalent to 3,357 millions of pounds of bread, or 8 ounces per day for every member of the community old and young; being nearly twice the quantity of wheat usually supplied by importation; and amounting in money value, at only 50s. the quarter, to £11,250,000 sterling—an absolute loss to the nation, lessened only by the produce of the bran, or rather by the difference between that and the cost of the labour and machinery expended in separating it.† The question of economy is

* After the publication of the first edition of this tract, the following passage from an author of the highest authority was pointed out to the writer; and he is happy to quote it as a strong corroboration of the statements in the text, which were founded chiefly on his own experience. “Bread made with undressed flour, or even with an extra quantity of bran, is the best form in which farinaceous and excremental matters can be usually taken; not only in diabetes, but in most of the other varieties of dyspepsia, accompanied by obstinate constipation. This is a remedy, the efficacy of which has been long known and admitted; yet, strange to say, the generality of mankind choose to consult their taste rather than their reason; and, by officiously separating what nature has beneficially combined, entail upon themselves much discomfort and misery.”—*Dr. Prout, on Stomach and Urinary Diseases*, p. 300.

† To this statement it has been objected, that the bran is employed to feed horses and cattle, and therefore not altogether lost; but the author's position is, that it is lost as human food; and not only so, but that by its separation the produce of wheat as the food of man is deteriorated, and much increased in price, as well as reduced in quantity. These are incontrovertible truths; and, to complete the impolicy of the measure, the animals to whom the bran

therefore one of much interest to the public, as well as the individuals; and the illustration of it might be extended with advantage, particularly at the present time; but the object of this tract, and the limits assigned to it, forbid in this place the further prosecution of the subject.

The writer could cite numerous examples in confirmation of the salutary operation of unfermented bread in all the morbid states for which he has recommended it, and several in which it has been taken with perfect ease and much benefit when no other could be borne; but, as his space is circumscribed, he will content himself with one, selected chiefly because, in publishing it, he can touch no feelings but his own, and violate no confidence.

In early life he resided, on several occasions, in London, for periods varying from two to six months; and in all of them suffered from constipation of the bowels. He attributed this

is given are injured by it; for to them it is unwholesome food, rendering them peculiarly liable, among other ailments, to calculous disorders, as is well-known to be the case with millers' horses.

Since the first publication of the preceding part of this note, Professor Johnston, of the University of Durham, has subjected the meal and flour of wheat to chemical analysis, and thereby illustrated and confirmed the conclusions drawn by the author of this tract from his own experiments and observations, and the statements of previous writers.—(*Vide Blackwood's Magazine for June, 1847*). According to this analysis, the flour of wheat contains, at the lowest estimate, 22 per cent. less of the staminal principles of nutrition than the entire meal; and, if to this is added the smallest allowance for the matters destroyed by fermentation, we shall be under the mark in saying, that fermented flour bread contains 25 per cent. less of the nutritious ingredients than unfermented meal bread. This loss in quality, together with the loss in quantity given at page 12, furnishes data for a correct estimate of the relative value of the two as articles of diet. Hence it appears, that *for every 75 loaves of fermented white bread we might possess 100 of unfermented meal bread; and in every 3 of these at least as much nourishment as is contained in 4 of the other.*

ailment to the bread, and remedying it as he best could, submitted to it as a temporary inconvenience.

But when, in process of time, he made London the field of his labour, the inconvenience became a serious evil; so that he set to work to devise means to obviate it. At first he invented a pill suited to his case, which answered the purpose as well as any drug could do, acting regularly and easily; and, possessing it, he might have been contented with his condition, but that he was unwilling to be both baffled in his own art, and obliged to resign himself to the constant use of any medicine, however simple. Recourse was therefore had to experiments with varieties of bread, and with different kinds of food. These ended, after numerous trials, in his relinquishing the use of bread almost entirely, and in the adoption, in its stead, of potatoes at dinner, and at breakfast of oatmeal with milk, in the form in which it is used in the north of England, and in Scotland. This was no inconsiderable sacrifice, for he had always been partial to bread: but he ceased to regret it very soon; for, by giving it up, the inconvenience was overcome, and the digestive functions restored to a healthy state. Under the new regimen he continued to enjoy the best of health for twenty years, requiring no medicine of any description all that time, except a calomel pill on three or four occasions for some casual discomposure. After this long period of uninterrupted well-doing, happening to be much among patients affected with continued fever, he was laid up with an attack of that disease. Nothing unusual occurred during its course; but on recovering, and returning to his occupations and accustomed diet, he was threatened with a new and more formidable disorder, in an excessive action of the kidneys, arising, as repeated observations proved, from the use of the oatmeal. This occurrence obliged him to discontinue a dish which hitherto he considered the most valuable that came to his table; and knowing no better substitute for it than bread, he was driven to the use of that article again. As on all former occasions, it at once interrupted the natural action of the bowels, and rendered pills an indispensable accompaniment.

To these he now reconciled himself as a matter of necessity, thankful for having gone through so large a portion of his life in a more agreeable way, and happy to find that they never failed to do their duty uniformly, and with as little discomfort as could be experienced by any one under similar circumstances. During the ten succeeding years, he took pills regularly, the bowels not acting even once without their assistance. But now another change was at hand. A loaf of unfermented brown bread happening to come in his way, he was led to partake of it, and finding it grateful to his taste, and of easy digestion, he was induced to give it a further trial. On the second day he was agreeably surprised to find that he could dispense with his pills, and up to the present time, a period of nearly five years, he has not found it necessary to resume them. Brown bread, prepared in the manner before directed, has been his daily fare; and (with the exception of a few occasions, when, by absence from town or otherwise, he has been under the necessity of breakfasting on common bread) his bowels have acted with the utmost regularity; and when rendered irregular by the use of fermented bread, as has always happened when that has been taken, the other has never failed to bring them back to a healthy condition in the course of two or three days. During the ten years of dependence on pills, he thought himself quite well; but on ceasing to require them, he experienced a sensible increase of strength, and a buoyancy of feeling to which he had been so long a stranger that he had become insensible to his loss.

An acquaintance with the facts of this little narrative having proved of much advantage to many persons, a desire has arisen to extend their usefulness beyond the limited circle of the writer. This statement is therefore given to the public, for the benefit of all whom it may concern.

February 9, 1846.